



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/796,310	03/08/2004	David S. Melton	31592-UT-1001	2088
5179	7590	09/20/2007		
PEACOCK MYERS, P.C. 201 THIRD STREET, N.W. SUITE 1340 ALBUQUERQUE, NM 87102			EXAMINER FICK, ANTHONY D	
			ART UNIT	PAPER NUMBER
			1753	
			MAIL DATE	DELIVERY MODE
			09/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/796,310	Applicant(s) MELTON ET AL.	
	Examiner Anthony Fick	Art Unit 1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>7/22/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: page 6, line 8, solar assemblies are notated with reference number 20 instead of 22; page 7, line 2, drive assembly is notated with reference number 34 instead of 32; and page 7, line 26, drive assembly is notated with reference number 34 instead of 32.

Appropriate correction is required.

Claim Objections

2. Claim 1 is objected to because of the following informalities: at line 5, it should be at least one solar power array not "a least one solar power array". Appropriate correction is required.
3. Claim 5 is objected to because of the following informalities: at line 2, one is misspelled as "on". Appropriate correction is required.
4. Claim 7 is objected to because of the following informalities: at line 2, it should read said at least one drive assembly not "at least one said drive assembly".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 7 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 1753

7. Claim 7 recites the limitation "said at least one vertical support structure" in lines 1, 2 and 4. There is insufficient antecedent basis for this limitation in the claim.

Applicant should alter the claim to vertical support pillar to match the reference in claim 1.

8. Claim 11 recites the limitation "said at least one rotor bearing assembly" in lines 2 and 3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1 through 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barker et al. (U.S. 5,228,924) in view of Azzam et al. (U.S. 6,201,181).

Barker discloses a photovoltaic panel assembly as shown in figure 1.

Regarding claim 1, figures 1 and 2 show the assembly comprising at least one support structure comprising beams and trusses, 16, 14, 12, 18, 22 and 24, disposed on at least one vertical support pillar, combination of 26, 28 and 30. The figures further show at least one drive assembly, 80, at least one solar power array, 2A, disposed on the support structure, comprising a plurality of solar panels, 4A, 4B, comprising photovoltaic cells, moveable on a single axis, 34, and attached to the drive mechanism to track movement of the sun (column 5, paragraph 2) and provide power to a nearby building (column 3, paragraph 5). Barker discloses that the array is positioned on a roof

(column 3, line 5). Thus the array forms part of the roof that is a canopy for anything underneath the roof, including at least one item.

Regarding claim 4, Barker discloses electrical conductors that form an electric output connector (column 4, lines 2-6).

Regarding claim 6, figures 2 and 3 show a horizontal support that has connectable ends, 34.

Regarding claim 7, figures 2 and 4 show the drive assembly disposed at a top end of the vertical support, 60 and 90 shown in figure 4; figures 2 and 3 show a rotor bearing assembly, 32, on each vertical support that does not comprise the drive assembly.

Regarding claims 8 and 9, figure 1 shows at least two solar power arrays, 2A and 2B, and at least two support assemblies.

Regarding claim 10, figure 2 shows the two support structures connected longitudinally, via 44 and 34.

Regarding claim 11, figure 2 shows the horizontal support of the two support structures connected to the drive assembly or rotor bearing assembly so that the structures are linked.

The differences between Barker and the claims are the requirements of specific electrical components; inverter, back-up, generator, or battery, and the requirement of a specific item to be underneath the array.

Azzam teaches a solar module array that produces electrical power from the sun. Azzam further teaches the photovoltaic panels can be electrically connected to a rechargeable battery or an inverter (column 6, paragraph 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize an inverter and storage battery as in Azzam for the photovoltaic array of Barker because as shown by Azzam, the use of storage batteries and inverters are well known in the photovoltaic arts. Also, the use of such elements allows the array to provide power for a wider range of applications; specifically to power any AC devices, sell electrical power back to the grid, or maintain power when the sun is not shining. The use of these devices for an array such as Barker would be obvious for one of ordinary skill in the art. Further inclusion of a back-up generator is another well known feature to ensure power supply for a photovoltaic system. Because Barker and Azzam are concerned with photovoltaic arrays, one would have a reasonable expectation of success from the combination. Thus the combination meets the claims.

Regarding claim 5, Barker discloses the use of the array on flat roofs to provide electrical power. It would have been further obvious to one of ordinary skill in the art at the time the invention was made to utilize the entire surface of a residential or commercial roof, including the garage areas, to produce more power from the array. By placing the array on the roof portion of a garage, the array will be disposed over at least one vehicle as required by the claim. Thus the claim is also an obvious choice over the combination.

Art Unit: 1753

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Fick whose telephone number is (571) 272-6393. The examiner can normally be reached on Monday - Friday 7 AM to 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Anthony Fick *ADF*
AU 1753
September 15, 2007

Nam Nguyen
NAM NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700